UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES
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Ex parte GORDON S. LINOFF and CRAIG W. STANFILL
_____

Appeal No. 97-0244
Application 08/042,357[1]
_____

ON BRIEF
_____

Before THOMAS, JERRY SMITH and TORCZON, Administrative Patent
Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellants have appealed to the board from the examiner's

final rejection of claims 2 thru 6, which constitute all of

the claims remaining in the application.

Representative claim 3 is reproduced below:

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[1]Application for patent filed April 2, 1993.

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3. An encoding system for generating an encoded represen-tation for a value "i" in response to a base value "b," a value "n" identifying a number of characters in each of a series of encoding groups in the representation, and a value "s" identifying a number of characters in a termination identifier identifying the end of the encoded representa-tion, the encoding system comprising:

A.   an encoding group number determining element for determining a value "N" identifying the number of encoding groups for the representation in accordance with

$$N = GI\{\log_b[(b-1)i+1]\}$$

where "GI" represents the greatest integer function;

B.   an encoded value difference determination element for using the value of "N" as determined by the encoding group number determining element, and the value of base "b," to determine an encoded value difference value * in accordance with

$$* = (b^N - 1)/(b-1);$$

C.   an encoded value identifier element for using the encoded value difference value * to generate an encoded value i' in accordance with

$$i' = i - *;$$

D.   an encoding group value determining element for determining values of each encoding group a_j in accordance with

$$i' = \mathbf{G}a_j\, b^j \text{ (sum over "j" from zero to N-1)};$$

E.   an encoded representation generating element for using the values of each encoding group a_j and the value of the termination identifier "s" to generate the encoded representation.

The following reference is relied on by the examiner:

Kato et al. (Kato)   5,168,533   Dec. 01, 1992

Claims 3 and 4 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 2, 5 and 6[2] stand rejected under 35 U.S.C. § 103. As evidence of obvious-ness, the examiner relies on Kato alone.

Rather than repeat the positions of the appellants and examiner, reference is made to the brief and the answers for the respective details thereof.

Opinion

Turning first to the rejection of claims 3 and 4 as being directed to non-statutory subject matter within 35 U.S.C. §

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[2]As to claim 6, due to the entry of an amendment filed with the appeal brief as noted at pages 1 and 2 of the answer, as well as an examiner's amendment, paper no. 14, dated May 29, 1996, it appears the examiner considers claim 6 to be part of the rejection under U.S.C. 103 once the dependancy problem had been clarified by these papers. Note the top of page 3 of the answer as well as page 5 of the brief's grouping of the claims.

101, we sustain this rejection.

We sustain this rejection even though the examiner's reas-oning in part relies upon the so-called Freeman-Walter-Abele test which has been disfavored in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1374, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998). It appears that numeric values per se are determined in claims 3 and 4 in the form of the recited "values" as well as the encoded representation for these "values". There is nothing recited in these claims representing any thing or any signal representing a thing or physical phenomena. The claims merely recite a mathematical algorithm or operations or calculations. There is no recited application of or no "employment" of such mathematical functions recited in the claims leading us to conclude there is no stated practical utility for the subject matter recited in claims 3 and 4 on appeal. Essentially, these claims recite a mathematical encoding operation in claim 3 and a

mathematical decoding operation in claim 4.

We are not persuaded by appellants' arguments that a "machine" within 35 U.S.C. § 101 and a specific apparatus in the form of a recited "system" and its attendant "elements" neces-sarily are limited to structure per se. They are essentially undefined in these claims. Appellants have not traversed the examiner's view that the recited elements are steps of a mathematical algorithm as argued at page 4 of the answer. The

claimed recitation in the preamble of claims 3 and 4 of respec-tive systems for encoding and decoding data representations are
not necessarily a recitation of a machine within 35 U.S.C. § 101 by the mere drafting technique of each claim featuring the respective "systems" stated to comprise various "elements".

Claims 3 and 4 convert any and all numeric "values" from one form to another by the respective encoding and decoding opera-tions in these claims. Indeed, the subject matter of claims 3 and 4 is much broader than the disclosed document

query processing system comprising a document database and a

document query processor. The claims are recited in such a

manner as to encompass all means and/or systems and elements

to perform the mathematical operations recited. In fact there

appears to be no apparatus that could solve the algorithm of

claims 3 and 4 without infringing the claim "structure". We

are of the view that appellants cannot circumvent the law by

simply nominally reciting elements which generally perform the

functions recited.

In any event, to the extent claims 3 and 4 may be inter-

preted in the alternative to recite actual structure in the

form of the claimed "system" and its respective "elements",

such a drafting approach amounts to no more that a gratuitous

recitation

of elements for the purpose of attempting to circumvent the

rejectability of these claims under 35 U.S.C. § 101 by

exalting form over substance. Any thing that would perform

the recited functions or mathematical operations may be

characterized as structure or machine elements. As a

practical matter, the algorithm can't be implemented without

some form of machine or structure elements in some way anyway.

In any event, we are in basic agreement with the examiner's

contention that the subject matter of claims 3 and 4 as a

whole each respectively attempt to preempt the underlying

mathematical operations and algorithms set forth in these

claims.

Turning lastly to the rejection of claims 2, 5 and 6

under 35 U.S.C. § 103, we reverse this rejection.

The examiner attempts, between pages 6 and 9 of the

answer, to correlate the language of claim 5 on appeal to some

portions of Kato. We have studied these positions and the

referenced portions of Kato as well as Kato as a whole and

conclude that the examiner appears to have fallen short of

setting forth the requisite *prima facie* case of obviousness

within 35 U.S.C. § 103 for independent claim 5. We reach a

similar conclusion with respect to independent claim 2 at

least because the examiner has

not set forth any stated basis to reject this claim but

appears to rely upon the analysis implicitly set forth for

claim 5 to reject claim 2.

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We simply do not agree with the examiner's contention that the referenced portions and figures of Kato support a conclusion of obviousness of each of the rejected claims. The examiner's approach appears to recognize certain deficiencies within Kato as to certain claimed features, but the rationale to supply these deficiencies relies too heavily in our view upon undocumented or unproven states of the art or what the artisan would have considered obvious to do. As such, we are in agreement with appellants' view as to the rejection of independent claims 2 and 5 on appeal that Kato does not teach or suggest encoding the index file as recited in these claims, as well as the consequent decoding operation in the last half of independent claim 5 on appeal. In view of the forgoing, we will not sustain the rejection of claims 2, 5 and 6 under 35 U.S.C. § 103.

In conclusion, we have sustained the rejection of claims 3 and 4 under 35 U.S.C. § 101, but have reversed the rejection of claims 2, 5 and 6 under 35 U.S.C. § 103. Therefore, the decision of the examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

<u>AFFIRMED-IN-PART</u>

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         JAMES D. THOMAS              )
         Administrative Patent Judge  )
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                                      )   BOARD OF PATENT
         JERRY SMITH                  )      APPEALS AND
         Administrative Patent Judge  )    INTERFERENCES
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         RICHARD TORCZON              )
         Administrative Patent Judge  )
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